

REMARKS

This communication responds to the Office Action mailed on March 8, 2006. Claims 1-2, 5-8, 14, and 21-22 are amended, claims 13 and 27 are canceled, and no claims are added. As a result, claims 1-12, 14-26, and 28-30 are now pending in this Application. Claims 23-26 and 28-30 have been withdrawn from consideration.

§102 Rejection of the Claims

Claims 1-3, 9-10, and 12-20 were rejected under 35 USC § 102(b) as being anticipated by Nelson et al. (U.S. 5,328,087; hereinafter "Nelson"). Claims 1, 11, 14, and 18-20 were rejected under 35 USC § 102(e) as being anticipated by Bunyan (U.S. 6,946,190; hereinafter "Bunyan"). The Applicant does not admit that Nelson or Bunyan are prior art and reserves the right to swear behind these references at a later date. In addition, because the Applicant asserts that the Office has not shown that Nelson or Bunyan disclose the identical invention as claimed, the Applicant traverses this rejection of the claims.

It is respectfully noted that anticipation under 35 USC § 102 requires the disclosure in a single prior art reference of each element of the claim under consideration. *See Verdegaal Bros. V. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ 2d 1051, 1053 (Fed. Cir. 1987). It is not enough, however, that the prior art reference discloses all the claimed elements in isolation. Rather, "[a]nticipation requires the presence in a single prior reference disclosure of each and every element of the claimed invention, *arranged as in the claim*." *Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co.*, 730 F.2d 1452, 221 USPQ 481, 485 (Fed. Cir. 1984) (citing *Cornell v. Sears, Roebuck & Co.*, 722 F.2d 1542, 220 USPQ 193 (Fed. Cir. 1983)) (emphasis added). "The *identical invention* must be shown in as complete detail as is contained in the ... claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989); MPEP § 2131 (emphasis added).

The Office asserts that both Nelson and Bunyan disclose a unitary layer of electrically non-conductive material that has "a plurality of openings ... communicatively coupled between the first surface and the second surface". However, a close reading of the references reveals that such is not the case.

Nelson teaches the use of a film 38 located between an IC chip 24 and an electrical interconnect substrate 26. See Nelson, FIG. 9. Before assembly, liquid gallium 14 is deposited into the vias 40 in the film 38. See Nelson, Col. 9, lines 35-41. This teaching is not the same as what is claimed by the Applicant because the vias 40 are not “openings.” Instead, the vias 40 serve as a repository for the liquid gallium 14 filler in every illustration of Nelson where the IC chip 24 and electrical interconnect substrate 26 are used together. See Nelson, FIGs. 3-6 and 9-16. Thus, no assembly of an IC chip 24, film 38, and electrical interconnect substrate 26 as taught by Nelson includes the “openings” claimed by the Applicant. Claims 1 and 14 have been amended to clarify that the openings are “unfilled openings”, and not for reasons related to patentability. Claim 2, 5-8, and 21-22 have been amended to conform to the use of this terminology in claims 1 and 14, and not for reasons related to patentability.

Bunyan teaches the use of a mechanism similar to that described by Nelson. That is, Bunyan describes a pad 10 located between a component 58 and a dissipation member 52. See Bunyan, FIG. 6. The pad 10 may comprise a member 43 having interstices filled with a thermally-conductive compound. See Bunyan, Col. 10, lines 16-24. As is the case with Nelson, none of the teachings of Bunyan include the use of “unfilled openings,” as claimed by the Applicant.

Since neither Nelson nor Bunyan teaches the identical invention claimed, it is believed that independent claims 1 and 14 (as well as all claims depending from them) are in condition for allowance. Reconsideration and withdrawal of the rejection of claims 1-3, 9-10, and 12-20 under § 102 is respectfully requested.

§103 Rejection of the Claims

Claims 4-7 and 21-22 were rejected under 35 USC § 103(a) as being unpatentable over Nelson. Since a *prima facie* case of obviousness has not been established with respect to the rejected claims, the Applicant respectfully traverses this rejection.

The Examiner has the burden under 35 U.S.C. § 103 to establish a *prima facie* case of obviousness. *In re Fine*, 837 F.2d 1071, 1074, 5 U.S.P.Q.2d (BNA) 1596, 1598 (Fed. Cir. 1988). In combining prior art references to construct a *prima facie* case, the Examiner must show some objective teaching in the prior art or some knowledge generally available to one of ordinary skill

in the art that would lead an individual to combine the relevant teaching of the references. *Id.*

The M.P.E.P. contains explicit direction to the Examiner that agrees with the *In re Fine* court:

In order for the Examiner to establish a *prima facie* case of obviousness, three base criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on Appellant's disclosure. M.P.E.P. § 2142 (citing *In re Taewk*, 947 F.2d 488, 20 U.S.P.Q.2d (BNA) 1438 (Fed. Cir. 1991)).

As noted above, Nelson does not teach the use of "unfilled openings" as claimed by the Applicant. Since the suggestions offered by the Office to modify Nelson do not relate to this teaching, and since there is no other evidence in the record that Nelson describes this type of apparatus, it is respectfully requested that the rejection of claims 4-7 and 21-22 under 35 U.S.C. § 103 be reconsidered and withdrawn.

Allowed Claims

Claim 8, while included in the list of "rejected claims" in the Office Action Summary, was not addressed at all in the "Response to Amendment" section of the Office Action. Based on the arguments above, it is believed that claim 8 is in condition for allowance, and the Applicant assumes that this claim has therefore been allowed. However, if it is determined that such is not the case, the Applicant respectfully requests the Office to explain the basis of any rejection of this claim as part of a non-final action so the Applicant has a full and fair chance to respond to any concerns that may be expressed.

CONCLUSION

The Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone the Applicant's attorney, Mark Muller at (210) 308-5677, to facilitate prosecution of this Application. If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

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